

Minutes of the  
CENTERS OF EXCELLENCE COMMISSION  
Tuesday, June 23 2015  
Room 148 of NDSU Research 1  
Fargo, ND

## CALL TO ORDER

Mark Nisbet, Chairman, called the meeting to order at 10:10 a.m.

**Commissioners Present:** Mark Nisbet, Terry Hjelmstad, Tim Hennessy, Kevin Melicher, Jim Traynor

**Commissioners Absent:** Kathy Neset

**Others Present:** Justin Dever and Christopher Kalash of the ND Department of Commerce; Mike Moore, Mark Askelson, Travis Desell (via phone), James Higgins, Ramesh Sharma (EERC) of the University of North Dakota; Kelly Rush, Jolynne Tschetter, Rob Sailer, of North Dakota State University; James Cieplak of Harrison, Tony Grindberg of Appareo Systems, Josh Kendrick of FedEx, Rocco Fiato of Accelergy Corporation

## COMMISSION BUSINESS

### Presentations from Applicants

#### **Cooperative Airspace Techniques and Visualization (CATV) Testing for Enabling UAS Operations**

**PI:** Chris Theisen, UND

**PD:** James Cieplak, Exelis, Inc.

Dr. Mark Askelson presented on *Cooperative Airspace Techniques and Visualization (CATV) Testing for Enabling UAS Operations* Research North Dakota proposal. This project would develop techniques, devices, and methods to aid in risk and safety assessment for performing beyond-visual-line-of-sight (BVLOS) UAS operations. This will be accomplished by integrating ADS-B (SRS) relay station data and primary radar data, and provide collision avoidance assistance to both manned and unmanned aircraft.

In response to a question from Melicher, Askelson elaborated on a statement he made earlier in his presentation about Japan's use of UAS in crop spraying.

In response to a question from Melicher, there will be no major equipment purchases as part of this project. At the end UND would like to purchase some ADS-B stations, but an RFP will be necessary.

In response to a question from Nisbet, this will provide a tremendous amount of information on the limitations and capabilities of using ADS-B for BVLOS.

Tony Grindberg, described Appareo Systems' role in this project.

#### **Developing Intuitive Parking Software with FedEx using High Performance Computing**

**PI:** Travis Desell, UND

**PD:** Josh Kendrick, FedEx

Dr. James Higgins, of UND, and Josh Kendrick, of FedEx, presented on the *Developing Intuitive Parking Software with FedEx using High Performance Computing* Research ND proposal (with Dr. Travis Desell participating via phone). In this project, UND would use its high performance computing capacity and aviation management expertise to develop software with FedEx that will increase efficiencies in its loading, unloading and flight operations at its Memphis hub.

In response to a question from Traynor, exactly how the IP is used will depend the results of the project.

### **Conversion of Vegetable Oils to Waxes, Lubricants, Transformer Fluids and Low-Toxicity Drilling Fluids**

**PI: Ramesh Sharma, University of North Dakota EERC**

**PD: Kenneth Trachte, Accelergy Corporation**

Dr. Ramesh Sharma, of UND EERC, and Dr. Rocco Fiato, of Accelergy Corporation, presented on the *Conversion of Vegetable Oils to Waxes, Lubricants, Transformer Fluids and Low-Toxicity Drilling Fluids* Research ND proposal. In this project, UND EERC would convert North Dakota feedstock into an environmentally friendly, biodegradable drilling fluid.

In response to a question from Traynor, the goal is to have a product that is lower cost, as good as or better than what exists, and is biodegradable. It will also be made in North Dakota and used in North Dakota and Montana's oil production.

In response to a question from Melicher, there are regulations about the performance attributes of drilling fluids regarding the biodegradability and toxicity to different organisms of different drilling fluids and where they can be used.

In response to a question from Melicher, Accelergy Corporation is searching for funding from multiple sources.

### **Discussion and Decisions Related to Research ND Proposals**

The Commission members submitted their scoring sheets and discussed the merits of the Research North Dakota proposals.

**It was moved by Hjelmstad and seconded by Melicher to fund all three of the applications.** Nisbet, Hennessey, Traynor, Hjelmstad, and Melicher voted "aye." No negative votes were cast.

### **Commission Business**

#### **Approval of minutes from the April 16, 2015 COE Commission meeting**

**It was moved by Melicher and seconded by Hjelmstad to approve the minutes from the April 16, 2015 meeting.** Motion carried on a voice vote.

#### **Center for Technologically Innovative Processes and Products Change Request**

Dr. Kelly Rush described how rent is assessed to tenants in Research 1. There are no state dollars to pay for the operation and maintenance of this building because it is rated as an auxiliary building.

Rob Sailer, CTIPP PI, said that the rent will be \$22,000 for his lab and office space. To generate enough funding to cover this, he may need to charge private partners more than CTIPP is currently charging them.

Justin asked if other COE's in Research 1 are being charged rent. Dr. Rush said yes, they are in the process of giving notice to the other COE's in the building.

In response to a question from Nisbet, Justin stated that this is not disallowed by the legislation.

**It was moved by Hennessy, seconded by Hjelmstad to approve NDSU's request to allow CTIPP to use COE funding to pay rent including operations and maintenance costs for space in Research 1, or another building. CTIPP will provide the COE Commission with a Change Request at its next meeting with a budget change to pay rent.** Motion carried on a voice vote.

#### **COE UAS Research Education and Training – Timeline Extension**

Request was for an extension through June 30, 2017.

**It was moved by Hennessy and seconded by Traynor to approve the timeline extension through September 30, 2015 and ask Alan Palmer to attend a future COE Commission meeting, prior to September 30, 2015 to update**



the COE Commission on his plans for securing a long-term/large volume customer. Motion carried on a voice vote.

### Consent Agenda

It was moved by Traynor, seconded by Hennessy, and carried on a voice vote to approve the consent agenda. Motion carried on a voice vote.

(Melicher left the meeting due to another commitment)

### Research Development and Commercialization of ParvoOne

Interim report has been received and, based on COE Commission motion that was passed on June 19, 2014, a \$250,000 disbursement was made.

It was moved by Traynor, seconded by Hjelmstad, to approve the disbursement. Motion carried on a voice vote.

### Center for Biopharmaceutical Research and Production

Request from Vice President Rush to terminate the Center.

It was moved by Hennessy, seconded by Hjelmstad, to terminate the Center for Biopharmaceutical Research and Production (CBRP), and to allow their 2015 Functional Review to be accepted as the center's Final Report. Motion carried on a voice vote.

## Updates

### Legislative Update

Dever stated that the Legislature provided an additional \$4.5 million into Research ND. In addition to that there are some carryover funds and the Legislature allowed the transfer of uncommitted Centers of Excellence funds into Research ND.

\$1 million must be designated to Research ND BIO. The similar designation from the previous biennium expired, so 2013-15 Research ND BIO funds have transferred to Research ND. The \$1 million for RND BIO must be available only for RND BIO for 18 months (July 1 2015-December 31, 2016).

### Research North Dakota Fund Status Update

Dever provided an overview of the Research North Dakota fund status. As of April 30, 2015, the Research ND portion has an unobligated balance of \$5,823,717.58. We just awarded \$864,368. That brings the fund down to \$4,959,349.58. There are roughly \$900,000 grants out for review from the May 22 round. That leaves about \$12.5 million for the biennium.

There was discussion about the opportunities to discuss Research ND successes and promote this program to Legislators and the press. Mike Moore, Associate Vice President, IP Commercialization and Economic Development UND participated in the discussion.

### Centers of Excellence and Centers of Research Excellence Fund Status Update

Dever shared the Centers of Excellence Fund Financial Statement and stated that there is \$4.25 million available that can be transferred to Research ND as a result of Centers that have closed. With about \$200,000 left in the fund for administrative expenses (annual reporting), the Commission may choose to transfer \$4.25 million to

Hjelmstad moved and seconded by Traynor to Request the office of Management and Budget to transfer \$4,250,000 from Centers of Excellence fund to the Research ND fund. Motion carried on a voice vote.

### Venture Grant Allotment

There was discussion regarding how much funding, from Research ND, to allot to Venture Grants.

**Traynor moved and Hennessy seconded to allocate \$2 million of Research ND funding for Phase I Venture Grants and \$2 million of Research ND funding for Phase 2 Venture Grants. This will be reviewed in a year to see if there is sufficient interest in Phase 2 to obligate \$2 million.** Motion carried on a voice vote.

There was also discussion regarding what type of marketing/business planning assistance Venture Grant PIs need to bring their projects to the point where they are ready for commercialization.

#### **Research ND application due dates**

**Kalash asked the Commission to set due dates for the coming year. Hjelmstad moved and Traynor seconded to have August 22, 2015; November 20, 2015; February 19, 2016; May 20, 2016; be the due dates for Research ND grant application for the coming fiscal year.** Motion carried on a voice vote.

#### **Research ND Policies and Procedures**

Commission had no changes it wanted to make to any of the policies and procedures at this time.

#### **Solix Contract**

Dever notified the Commission that the contract with Solix, for technical reviews of applications, is due to expire on June 30, 2015. The contract has an option to renew until June 30, 2017. The terms are \$1500 per review for the first 35 applications and \$1600 per review after that. **It was moved by Hennessy and seconded by Traynor to renew the contract with Solix through June 30, 2017.** Motion carried on a voice vote.

#### **Stingray: Integrating BVLOS C2 Communications into UAS**

Minor budget change approved administratively (<20%)

#### **Disbursements**

Dever notified the Commission that the Department of Commerce has approved the following disbursements, based upon COE Commission policy:

- Stingray: Integrating BVLOS C2 Communications into UAS, Development of Micro Cold Spray Print System, Commercial Feasibility of Novel Renewable Based Polyamide Thermoplastics, Development of glioma prognosis kit, Proof of Concept CCN Counter for UAS, Push-Button Adhesion Control, Structural Characterization of Candida Vaccines, Smart C2-Virtual Air Boss Enhancement, Reduction of Gas Flaring by advanced separation and storage, Novel Anti-Inflammatory Drugs for Treating Alzheimer's Disease, Research and Development of Immunotherapeutic and Vaccine Candidates for Porcine Epidemic Diarrhea Virus, Applied Research - Wind Turbine Blade Inspection Technology Application

#### **Interim Reports Received**

Dever notified the Commission that the Department of Commerce has received the following Interim and Quarterly Reports. No concerns were noted.

- Stingray: Integrating BVLOS C2 Communications into UAS, Anti-Inflammatory Drugs for Treating Alzheimer's Disease, Sensing Earth Environment Directly (SEED) sensor, Nanospheres to provide commercially important new properties to paints and coatings, Process and application research and development for Soy-based materials for industrial applications, Limited Deployment Cooperative Airspace Project NDSU, Center for Advanced Electronics Design and Manufacturing, Center for Sensors Communications and Control, Development of glioma prognosis kit, Center for Technologically Innovative Processes and Products (CTIPP 1)

#### **CTIPP 2 Compliance Agreement**

CTIPP 2 has signed its Compliance Agreement to begin drawing funds down. The CTIPP 1 funds have all been expended.

#### **2014 Monitoring Report Review**

NDSU-Center for Advanced Electronics Design & Manufacturing - **It was moved by Hennessy and seconded by Traynor to list this center as "On Track" in the 2014 Monitoring Report.** Motion carried on a voice vote.



**NDSU-Center for Surface Protection** - It was moved by Traynor and seconded by Hennessy to list this center as "On Track" in the 2014 Monitoring Report. Motion carried on a voice vote.

**NDSU-Center for Agbiotechnology: Oilseed Development** - It was moved by Hennessy and seconded by Traynor to list this center as "On Track." In the 2014 Monitoring Report. Motion carried on a voice vote.

**UND Research Foundation-Center of Excellence in Life Sciences and Advanced Technology** - It was moved by Hennessy and seconded by Hjelmstad to list this center as "Needs Improvement" in the 2014 Monitoring Report. Motion carried on a voice vote.

**UND Research Foundation-Center for Passive Therapeutics** - It was moved by Hennessy and seconded by Traynor to list this center as "Needs Improvement" in the 2014 Monitoring Report. Motion carried on a voice vote.

**UND-Unmanned Aircraft Systems Center of Excellence** - It was moved by Traynor and seconded by Hjelmstad to list this center as "On Track" in the 2014 Monitoring Report. Motion carried on a voice vote.

**NDSU-Center for Biopharmaceutical Research & Production** - It was moved by Traynor and seconded by Hennessy to list this center as "Needs Improvement" in the 2014 Monitoring Report. Motion carried on a voice vote.

**NDSU-Center for Integrated Electronic Systems** - It was moved by Traynor and seconded by Hennessy to list this center as "Meets Expectations" in the 2014 Monitoring Report. Motion carried on a voice vote.

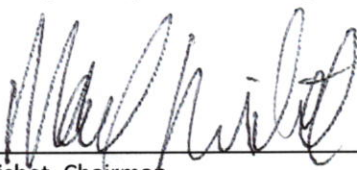
**NDSU-Center for Sensors, Communication and Control** - It was moved by Hennessy and seconded by Hjelmstad to list this center as "On Track" in the 2014 Monitoring Report. Motion carried on a voice vote.

**UND-Center of Excellence in Space Technology and Operations** - It was moved by Traynor and seconded by Hennessy to list this center as "Terminated – Did Not Meet Expectations" in the 2014 Monitoring Report. Motion carried on a voice vote.

Justin thanked Terry Hjelmstad for his work on the Centers of Excellence Commission. His term on the State Board of Higher Education expires on June 24, 2015 at noon.

## ADJOURNMENT

The meeting was adjourned at 3:00 p.m.

  
Mark Nisbet, Chairman

8-12-15  
Date

  
Christopher Kalash, Acting Recording Secretary

8/12/2015  
Date